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10 CFR 52.99(c)(1)U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
Resubmittal of ITAAC Closure Notification on Completion of 2.5.05.03b [Index Number 570]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.5.05.03b [Index Number 570]. This ITAAC confirms that the Class 1E cables between the Core Exit Temperature sensors and the connector plates have sheaths. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52," which was endorsed by the NRC in Regulatory Guide 1.215.

Southern Nuclear Operating Company (SNC) previously submitted ITAAC Closure Notification on Completion of ITAAC 2.5.05.03b [Index Number 570], Letter Number ND-20-0621 dated July 31, 2020 [ML20216A594]. This resubmittal addresses changes made to ITAAC by Amendment 186 to the Vogtle Electric Generating Plant (VEGP) Unit 4 Combined License (COL) and supersedes ND-20-0621 in its entirety.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.5.05.03b [Index Number 570].

MJY/TJC/sfr

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**Southern Nuclear Operating Company
ND-21-0960
Enclosure**

Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.5.05.03b [Index Number 570]

ITAAC Statement

Design Commitment

3.b) The Class 1E cables between the Core Exit Temperature sensors and the connector plates have sheaths.

Inspections/Tests/Analyses

Inspection of the Class 1E cables will be performed.

Acceptance Criteria

The Class 1E cables between the Core Exit Temperature sensors and the connector plates have sheaths.

ITAAC Determination Basis

Inspection of the Class 1E cables between the Core Exit Temperature sensors (sensors are located within the incore thimble assemblies) and the connector plates (these connectors are beyond the integrated head package on the operating deck connector panel) was performed to verify that the 1E cables have sheaths.

The incore thimble assemblies and the connection panel located on the Integrated Head Package (IHP) are connected by Class 1E head area cable assemblies (wires and connectors), which transmit the safety-related core exit temperature signals to the protection and safety monitoring system (PMS). The incore thimble assemblies contain Class 1E cables which connect the Core Exit Temperature sensors to the connector on the end of the incore thimble assemblies.

Design specifications require internal metallic sheaths that surround and separate the Class 1E thermocouple wires from non-Class 1E detector wires, which are contained within an external spiral wound sheath. The design specifications also include performance tests for overvoltage, insulation resistance, and continuity. Successful test results indicate that the sheaths protect against credible single faults between the Class 1E and non-Class 1E signals.

The Quality Release and Certificate of Conformance (Reference 1) verifies the head area cable assembly acceptance test results. The Field Service Report (Reference 2) verifies the head area cable assemblies were installed on the integrated head package in accordance with design drawings and installation specifications issued for construction, and work package requirements. The Quality Release and Certificate of Conformance (Reference 3) and AP1000 Incore Instrument Thimble Assembly drawing (Reference 4) verifies that the in-vessel Class 1E cables were installed within the incore thimble assemblies in accordance with design drawings and installation specifications and contains the incore thimble assemblies cable acceptance test results.

The Class 1E cables between the Core Exit Temperature sensors and the connector plates were inspected to verify that the design specification and installation specifications are satisfied, to enable each cable to convey the safety-related core exit thermocouple signals to the PMS, as identified in the Combined License (COL) Appendix C ITAAC 2.5.05.03b, Design Description.

The inspections were performed and documented in accordance with manufacturer and vendor quality verification programs. The results of the inspections are documented in the Unit 4 Principal Closure Documents (References 1 through 4) supporting the ITAAC 2.5.05.03b Completion Package (Reference 5). The inspections confirmed that the Class 1E cables between the Core Exit Temperature sensors and the connector plates have sheaths.

The Unit 4 Principal Closure Documents (References 1 through 4) are available for NRC inspection as part of the Unit 4 ITAAC 2.5.05.03b Completion Package (Reference 5).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review to identify all findings pertaining to the subject ITAAC and associated corrective actions. This review found there were no relevant findings associated with this ITAAC. The review is documented in the Completion Package (Reference 5) for ITAAC 2.5.05.03b and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.5.05.03b was performed for VEGP Unit 4 and that the prescribed acceptance criteria were met.

Systems, structures, and components required to satisfy this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV4-EW25-VQQ-002, Rev 0, "Quality Release & Certificate of Conformance – Head Area Cable Assembly"
2. SV4-MV10-S8R-001, Revision 1, "AP1000 - Vogtle 4 Field Service Report - Integrated Head Package Field Assembly, (IHPFA)"
3. SV4-JE90-VQQ-001, Rev. 0, "Quality Release & Certificate of Conformance – Incore Instrument Thimble Assembly"
4. SV4-JE90-V2-001, Rev 1, "AP1000 Incore Instrument Thimble Assembly"
5. 2.5.05.03b-U4-CP-Rev1, ITAAC Completion Package